October 2026 Health Watch and Observations
Spotlight Air Environmental (SAE)

Data Centers and Power Plants

Serious Concerns About Power Plants' Role In AI Data Centers That May Be Headed Our Way

Danger Danger. The prospect of a data center coming to Urbana-Champaign or someplace else in Champaign County sends blinking "danger danger" signs. Hence, the many complaints, although most seem to address relevant issues around water, noise, diesel generators, etc.

Key Questions. What regional traditional power plant/s will contribute to the electrical power/grid for the prospective data center/s? Alternatively, will the data center/s construct their own private onsite (behind-the-meter) power plant/s, which is now the growing trend.[1,2]

Exposure. Power plants in general emit enough hazardous pollution under normal circumstances. In addition to the pollutants our noses *can* smell, power plants largely emit pollutants that people's noses don't always or can't at all detect, like — silent nonbiodegradable heavy metals, particulate matter, and certain toxic chemicals and gases. Apart from incredible environmental harm, these pollutants are known to cause — severe asthma, lung cancer, heart attacks, strokes, organ damage, and are linked to Parkinson's, dementia, and other serious diseases and conditions we often attribute to some other origin. As for energy sources, coal in 2024 supplied 15% of electricity for data centers.[3.] According to Our World in Data—an Oxford organization—worldwide mortality rates per terawatt-hour (TWh) of electricity indicate that coal is the absolute deadliest energy source used, averaging roughly 24.62 deaths per TWh, primarily driven by its air pollution.[4.] Natural gas, however, supplied more than 40% of data centers' electricity in 2024.[3.] It pollutes substantially during combustion. Likewise, it pollutes during fugitive emissions of methane—its main constituent—in the course of production, processing, and distribution. It may have a better reputation, but it's very dangerous to local communities at low levels.[5]

In any case, whether power plants fire with more coal than they care to admit, or they fire with fuel oil or natural gas, data centers are increasingly pumping new life into a power sector whose biggest foot had fortunately been retreating. So let's think about this —

1. Say a data center does locate in our town or elsewhere in the county:
   A. Typically, specified power plants (traditional or behind-the-meter) have to scale up to meet centers' voracious demands for electrical power. As these plants operate at a higher capacity (to supply 100MW to 1,000MW)[7] 24/7, their hazardous emissions increase to extraordinary levels.[6.] This is far, far worse than data centers' occasionally and briefly run diesel generators.
   B. Not to mention, according to World Health Organization, pollutants can travel across oceans due to atmospheric currents.[8,9] So, what's a half-mile (that may only work as a noise barrier).
   C. And, even if our ordinance does require 50% renewable energy generation, the brutal pollution it will take to get the other 50% will only add to the cumulative impact of what we're already dealing with (as EPA's ECHO[10] site, and instruments and some of the testing conducted for Spotlight Air Environmental[11] may suggest). In any case, let's remember that term, "cumulative impact," and see if it can used. Its Illinois Senate Bill 3772 was signed into law on August 7, 2026. (However, please note — the air permitting part of the bill *only pertains* to construction permits submitted on or after January 2027.[12])

Stop. Back to "danger danger." It is SAE's opinion that data centers, especially those of a large-scale, are not in the best interest of our long-term survival with respect to our precious lives and pocketbooks. And for that reason, any new data center here or in our county a very, very bad idea. Champaign County Board, please stop it any legal way you can while you can.

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